

# Notice of Allowability

Application No.

10/050,599

Examiner

Kirsten C Jolley

Applicant(s)

HONG ET AL.

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to after-final amendments, arguments, and Declaration of 11/15/04.
2. ☒ The allowed claim(s) is/are 1,2,5-7,9,12 and 15-18.
3. ☒ The drawings filed on 18 January 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

The 35 USC 112, 1<sup>st</sup> paragraph rejection set forth in the final Office action has been withdrawn in response to the amendment to claim 15.

The Declaration submitted under 37 CFR 1.132 on November 15, 2004 has been considered, and is sufficient to overcome the 35 USC 102(a) rejections over the article by Cho et al. set forth in section 7 of the prior Office action, for the reasons argued by Applicant and set forth in MPEP 715.01(c) and 716.10.

The 35 USC 103(a) rejections over Decher et al. in view of Chabreck et al. alone, or over Decher et al. in view of Chabreck et al. and Ushijima, have been withdrawn in response to Applicant's showing of unexpected results as discussed in the final Office action. The showing is considered commensurate in scope with the claims in response to Applicant's amendments to independent claim 1, as well as in response to Applicant's arguments stating that materials other than polyelectrolytes were used in fabricating the film of the present invention (as demonstrated in the table on pages 7-8 of Applicant's after-final response), and Applicant's arguments stating that the particular spinning time is dependent upon the time for removing the particular solvent used in the coating and washing steps and is influenced by the choice of solvent, spinning speed, and the like.

The 35 USC 103(a) rejections over the publication to Dubas et al. have been withdrawn in response to Applicant's arguments that the Dubas et al. method is a hydrodynamic method in which the substrate on a rotating shaft is dipped into beakers of the layer producing material and

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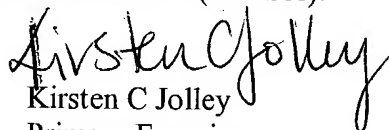
solvent, and rotation occurs *while* immersing. Applicant argues that the results achieved by the present invention will not be achieved during the dip cycling method of Dubas et al. because the improved multilayers of the present invention are formed not only by the attractive intermolecular force between adjacent layers, but also by the viscous force due to facile solvent removal during spinning, and other factors encountered during spinning such as shear air force (as argued in the second full paragraph on page 10 of the after-final response). Such solvent removal (and the forces generated therefrom), as well as shear air force, would not occur in the process of Dubas et al. since Dubas et al.'s spinning occurs while the substrate is still immersed in solution. (This is further evidenced by Dubas et al.'s statement that the trends in film thickness on its rotating substrates are similar to those for static dip-cycled multilayers.) Thus Applicant's arguments are convincing, and it is the Examiner's position that similar unexpected results would be achieved when comparing the claimed spinning process of the instant invention to the hydrodynamic dipping process of Dubas et al. as those achieved in comparing the claimed spinning process to a conventional dipping process (as discussed in the specification).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirsten C Jolley whose telephone number is 571-272-1421. The examiner can normally be reached on Monday to Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kirsten C Jolley  
Primary Examiner  
Art Unit 1762

kcj